

WHAT IS CLAIMED IS:

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1. A magnetic disk evaluation apparatus,
comprising:

an evaluation head for evaluating a
magnetic disk; and

10 a support member for supporting the
evaluation head,

wherein the support member supports the
evaluation head in a state where a flying surface of
the evaluation head and a surface of a magnetic disk
15 make a flying pitch angle of $95 \mu\text{rad}$ or more.

20 2. The magnetic disk evaluation apparatus
as claimed in claim 1, wherein the support member
supports the evaluation head at a position of $0.78L$
or more from an air inflow end part of the
evaluation head, where L is defined as a whole
25 length of the evaluation head in an airflow
direction.

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3. The magnetic disk evaluation apparatus
as claimed in claim 1, wherein a load of 3.5 gf or
more is provided to the evaluation head by the
support member.

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4. The magnetic disk evaluation apparatus
as claimed in claim 1, wherein the evaluation head
has a negative pressure inducing configuration, and
thereby a negative pressure to attract the
5 evaluation head to the magnetic disk on the basis of
an airflow caused by a rotation of the magnetic disk
is generated.

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5. The magnetic disk evaluation apparatus
as claimed in claim 1, wherein a rigidity of an air
film formed between the evaluation head and the
15 magnetic disk is 0.33 gf/nm or more.

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6. The magnetic disk evaluation apparatus
as claimed in claim 1, wherein a lower limit value
of a flying-height of the evaluation head from the
surface of the magnetic disk in a state where the
glide height evaluation head is not in contact with
25 the magnetic disk is evaluated by the evaluation
head.

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7. The magnetic disk evaluation apparatus
as claimed in claim 1, wherein the evaluation head
includes a flying surface, and at least part of the
flying surface is formed by a film of a protection
35 material selected from a group consisting of an
amorphous carbon, a diamond like carbon, a diamond
like carbon to which hydrogen is added, and a

diamond like carbon to which nitride is added.

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8. The magnetic disk evaluation apparatus as claimed in claim 7, wherein at least part of the formed film of the protection material is fluoride-processed.

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9. The magnetic disk evaluation apparatus as claimed in claim 7, wherein a convex part projecting towards the magnetic disk is formed on a part of the formed film of the protection material.

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10. A magnetic disk evaluation apparatus including an evaluation head, comprising:

a contact detect means for detecting a contact with a magnetic disk on which a lubricant is applied and outputting a detected signal;

a detected signal dividing means for dividing the detected signal into frequency components of a first frequency band which are generated based on a contact between a convex part of the magnetic disk and the evaluation head, and frequency components of a second frequency band which are generated based on a contact between a convex part of the lubricant and the evaluation head; and

a contact decision means which is connected to the detected signal dividing means, and

detects a contact of the evaluation head with the
convex part of the lubricant in response to
detection of a signal component exceeding a
designated threshold only in the second frequency
5 band.

10 11. The magnetic disk evaluation apparatus
as claimed in claim 10, wherein the contact decision
means further decides that the evaluation head comes
in contact with the convex part of the magnetic disk
in case of that a signal component exceeding a
15 designated threshold value at least in the first
frequency band is included in the detect signal.

20 12. The magnetic disk evaluation apparatus
as claimed in claim 10, wherein the first frequency
band and the second frequency band are separated by
a border frequency selected from 100 - 500 kHz on a
25 basis of a configuration of the evaluation head.

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